Remarks:

Applicant has carefully studied the non-final Examiner's Action mailed 07/12/2005, having a shortened statutory period for response set to expire 10/12/2005, and the Dutro reference cited therein. The amendment appearing above and these explanatory remarks are believed to be fully responsive to the Action. Accordingly, this important patent application is now believed to be in condition for allowance.

Applicant responds to the outstanding Action by centered headings and numbered paragraphs that correspond to the centered headings and numbered paragraphs employed by the Office, to ensure full response on the merits to each finding of the Office.

Priority

1. Applicant thanks the Office for acknowledging receipt of the papers submitted under 35 U.S.C. 119(a)-(d).

Claim Rejections – 35 U.S.C. § 102

Applicant acknowledges the quotation of 35 U.S.C. § 102(b).

2. Claim 42 stands rejected under 35 U.S.C. 102(b) as being anticipated by Dutro. Reconsideration and withdrawal of this ground of rejection is requested because Dutro does not teach or suggest an auxiliary winding that is reversely connected with respect to a main winding. Accordingly, the respective currents flowing in said windings are not in reverse directions relative to one another and the benefits provided by Applicant's invention are not provided by the Dutro invention.

This important contribution of Applicant (the reverse connection between the main and additional windings) is claimed in rejected independent claims 42 and 67. Therefore, neither of said claims requires amendment to define over Dutro.

However, to emphasize the importance of this novel contribution to the art, both of said independent claims are amended to recite that that the conductor that forms the main winding has a cross-section greater than the conductor that forms the additional winding. This additional recital of structure is added to claims 42 and 67 from dependent claims 46 and 71, respectively, so said dependent claims are cancelled.

If one of ordinary skill in the art of motor winding is told to wind a main winding and an additional winding with the additional winding being reversely connected to the main winding, said person will not create the winding depicted in the Dutro drawings. In the Dutro drawings,

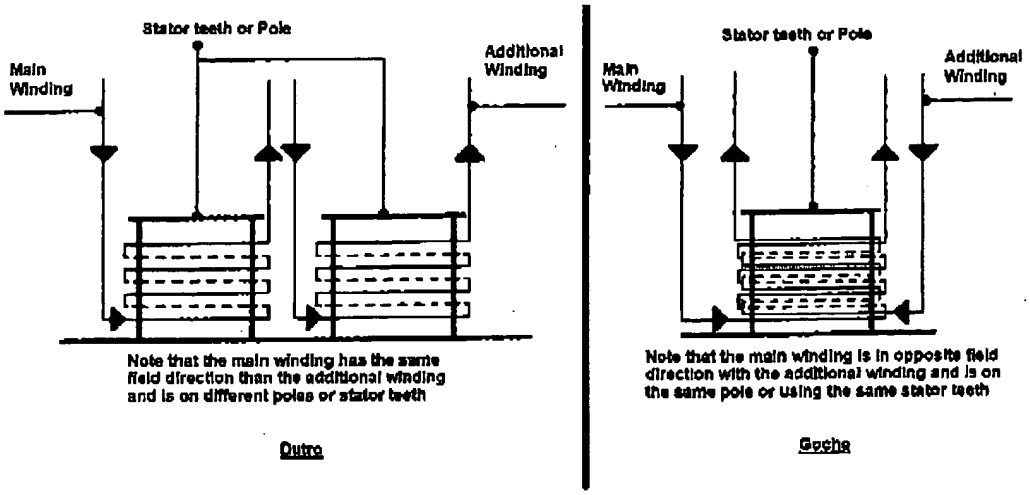
main winding 34-1 is coiled about stator tooth 16-1, auxiliary winding 38-2 is coiled around stator tooth 16-2, main winding 34-3 is coiled about stator tooth 16-3, auxiliary winding 38-4 is coiled around stator tooth 16-4, main winding 34-5 is coiled about stator tooth 16-5, auxiliary winding 38-6 is coiled around stator tooth 16-6, main winding 34-7 is coiled about stator tooth 16-7, and auxiliary winding 38-8 is coiled around stator tooth 16-8. Accordingly, it cannot be said that the main and auxiliary windings of Dutro are reversely connected with respect to one another because they are separately wound about different stator teeth in circumferentially spaced apart relation to one another.

Dutro recites in column 3, lines 3-14:

> The auxiliary winding is connected in parallel with the main winding. The stator teeth are equal in number to twice the number of poles. The main winding includes a plurality of coils equal in number to the number of poles and the main winding coils respectively embrace alternate consecutive teeth. The auxiliary winding includes a plurality of coils equal in number to the number of poles and the auxiliary winding coils respectively embrace consecutive alternate teeth respectively immediate the first named alternate teeth. There is one coil only on each of the teeth. (emphasis added)

There are two coils on each of Applicant's stator teeth (or group of stator teeth to form a pole). Applicant's invention cannot function if there is only one coil on each stator tooth (or group of stator teeth to form a pole) as taught by Dutro.

The main and additional windings of Applicant are not circumferentially spaced apart from one another as in Dutro. The following drawing depicts the claimed winding and the Dutro winding in side-by-side relation to one another:



Clearly, Dutro teaches away from the invention as claimed. Applicant therefore should not merge the subject matter of dependent claim 43 into independent claim 42 because to do so would mislead the art into believing that Dutro had taught reverse connection of a main winding and an additional winding in the manner disclosed only by Applicant. One of ordinary skill in the art, upon reading Applicant's specification, would produce windings like those depicted in the Goche drawing, not the Dutro drawing.

Independent claims 42 and 67 are amended to point out that the cross-section of the conductor that forms the main winding is greater than the cross-section of the conductor that forms the additional winding. This requires cancellation of dependent claims 46 and 71 as aforesaid. The record should reflect, however, that the cancellation of said dependent claims and the merger of their respective contents into independent claims 42 and 67 is not required by Dutro.

An affidavit by a leading expert in the field of motors (Alan Wallace, Ph.D., engineering faculty, Oregon State University) is attached hereto, together with the *curriculum vitae* of the affiant.

The remarks that follow are not required to further distinguish the invention from Dutro but are intended to protect the record by more clearly delineating the differences between the claimed invention and the teachings and suggestions of Dutro.

Dutro teaches how to vary the speed of a single phase, split phase type of motor. Motors of this type do not use separate start windings. They are small, fractional horsepower motors used in ventilation applications, for example, or other applications that do not require a high starting torque. The Dutro specification discloses a single-phase motor that drives a fan for an appliance.

Dutro is silent on the issue of saving energy by reducing or eliminating the return of reactive power to a power-generating facility. A Dutro-type motor returns as much reactive energy to a generating facility as does any other conventional motor.

Applicant's motor, on the other hand, saves energy and can be of any size, speed, voltage, or phase (single or multiple). Applicant's motor may also be of any required duty: High torque, low torque, starting and running.

The capacitor in the Dutro motor is in series with the auxiliary winding and has a value that produces the desired speed control. More specifically, Dutro teaches a two-speed motor and therefore teaches the use of two capacitors – one for low speed operation and one for high-speed operation. Applicant's capacitor is in series with the additional winding but there is only one capacitor for all motor speeds.

There are numerous prior art patents that use capacitors to reduce the return of reactive energy to a generating source, but the art does not teach the placement of a capacitor in series with an additional winding that is reversely wound with respect to a main winding, thereby increasing the efficiency of a motor over its entire operating spectrum, *i.e.*,, from no load to full load and all loads therebetween. Only Applicant provides a motor having increased efficiency (less reactive power returned to the generating facility) over all load conditions. This sharply distinguishes the claimed invention from Dutro's contribution which includes low and high speed capacitors, neither of which is in series with an auxiliary/additional winding that it reversely wound with respect to its associated main winding and both of which have efficacy only at two distinct (low and high) loads.

The auxiliary winding of Dutro must remain in line at all times. Dutro recites at column 2, lines 5-12:

> It should be noted that the auxiliary winding always remains in the line and, during operation provides the necessary flux, along with the main winding, for driving the motor. In fact, the asynchronous induction motor would stop and not work if the auxiliary winding

were not in line at all times. Thus the present invention only causes the rotational speed of the motor to be increased and decreased.

In contrast, a motor equipped with Applicant's invention does not stop operating if the additional winding is removed from the circuitry (by disconnecting each additional winding from its associated main winding at its opposite ends). The motor will continue operating, and produce an undiminished amount of torque, but it will no longer have increased efficiency over its entire load, *i.e.*, power consumption increases if the additional winding is removed from the circuit. This is yet another fundamental difference between the Dutro invention and the present invention.

By returning less reactive energy to the generating facility, the motor of the claimed invention costs less to operate than a motor lacking the reversely connected additional winding in series with a capacitor.

Claim Rejections – 35 U.S.C. § 103

Applicant acknowledges the quotation of 35 U.S.C. § 103(a).

3. Claim 67 stands rejected under 35 U.S.C. 103(a) as being suggested by Dutro. Reconsideration and withdrawal of this ground of rejection is requested for the same reasons provided in paragraph 2 above.

Allowable Subject Matter

Applicant acknowledges that claims 34-66, 68-75 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, for the reasons provided above, such an amendment would be confusing to the art.

Conclusion

If the Office is not fully persuaded as to the merits of Applicant's position, or if an Examiner's Amendment would place the pending claims in condition for allowance, a telephone call to the undersigned at (727) 507-8558 is requested. Applicant thanks the Office for its careful examination of this important patent application.

Very respectfully,

SMITH & HOPEN

By: _____

Dated: September 7, 2005

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pc: Miraculous Motors Corporation

CERTIFICATE OF FACSIMILE TRANSMISSION
(37 C.F.R. 1.8(a))

I HEREBY CERTIFY that this Amendment D, including Introductory Comments, Amendments to the specification, Amendments to the claims, Remarks, and affidavit is being transmitted by facsimile to the United States Patent and Trademark Office, Art Unit 2834, Attn: Mr. Tran N. Nguyen, (571) 273-8300, on September 7, 2005.

Dated: September 7, 2005

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Deborah Preza